

Appl. No. *To Be Assigned*; Group Art Unit: *To Be Assigned*; Inventors: Michelle M. Hanna.; Tel: 202.371-2600

Title: Molecular Detection Systems Utilizing Reiterative Oligonucleotide Synthesis

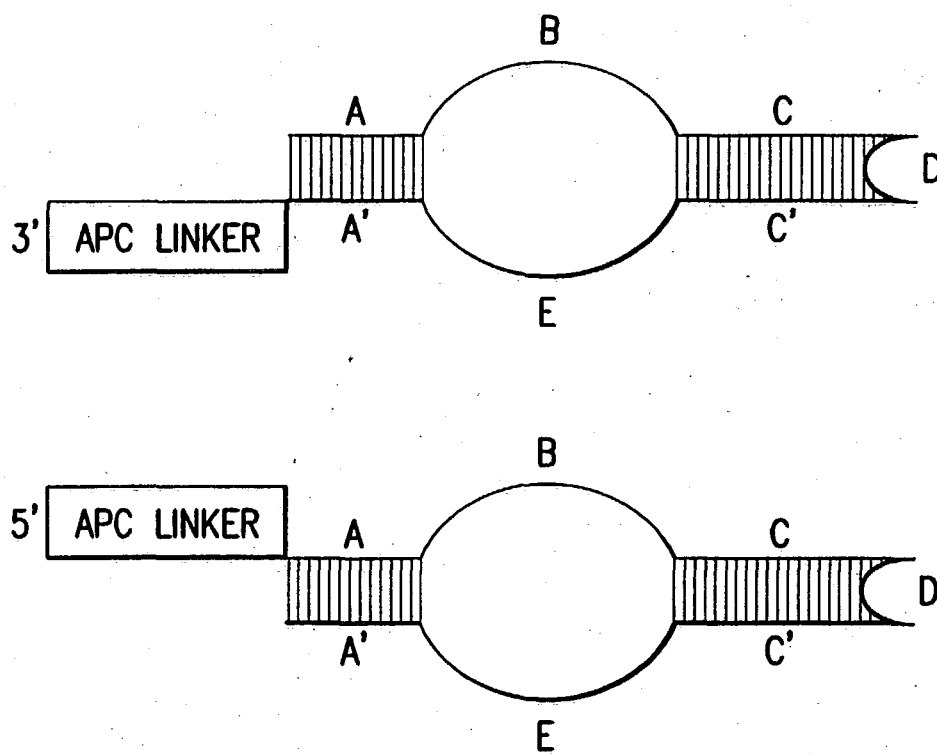
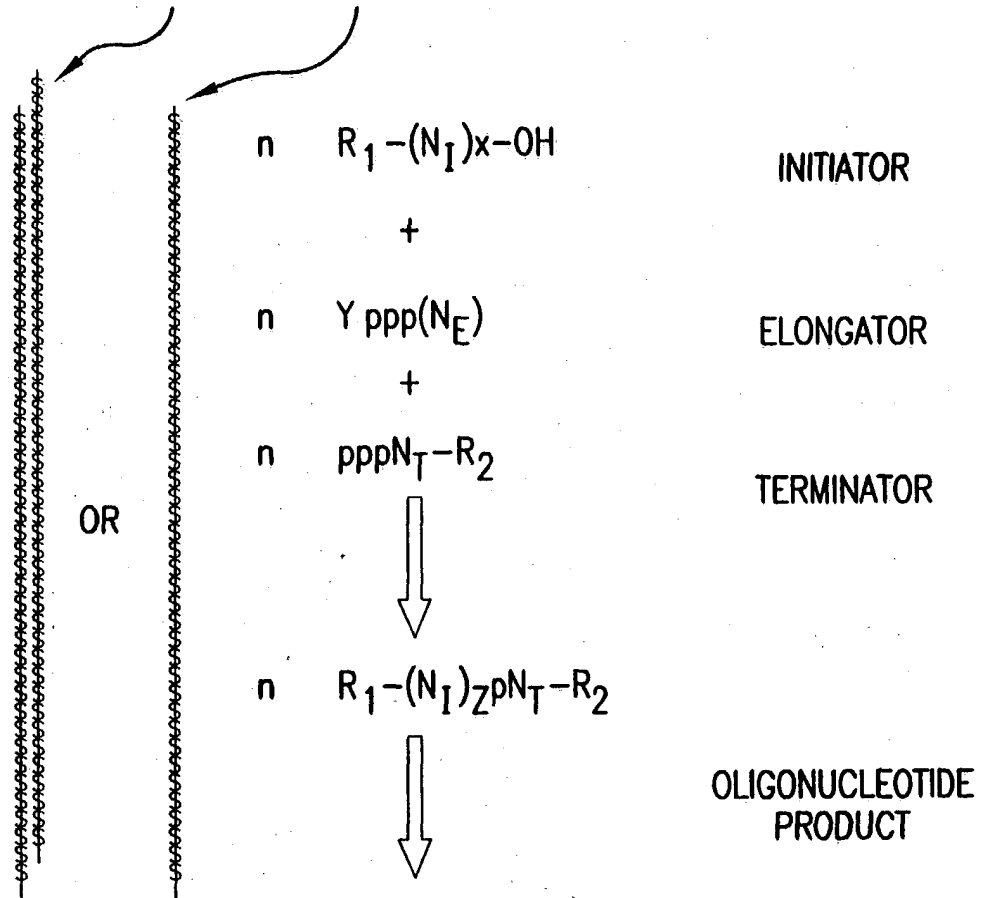


FIG. 1

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DOUBLE STRANDED OR SINGLE STRANDED DNA OR RNA



MULTIPLE SIGNALS

FIG.2

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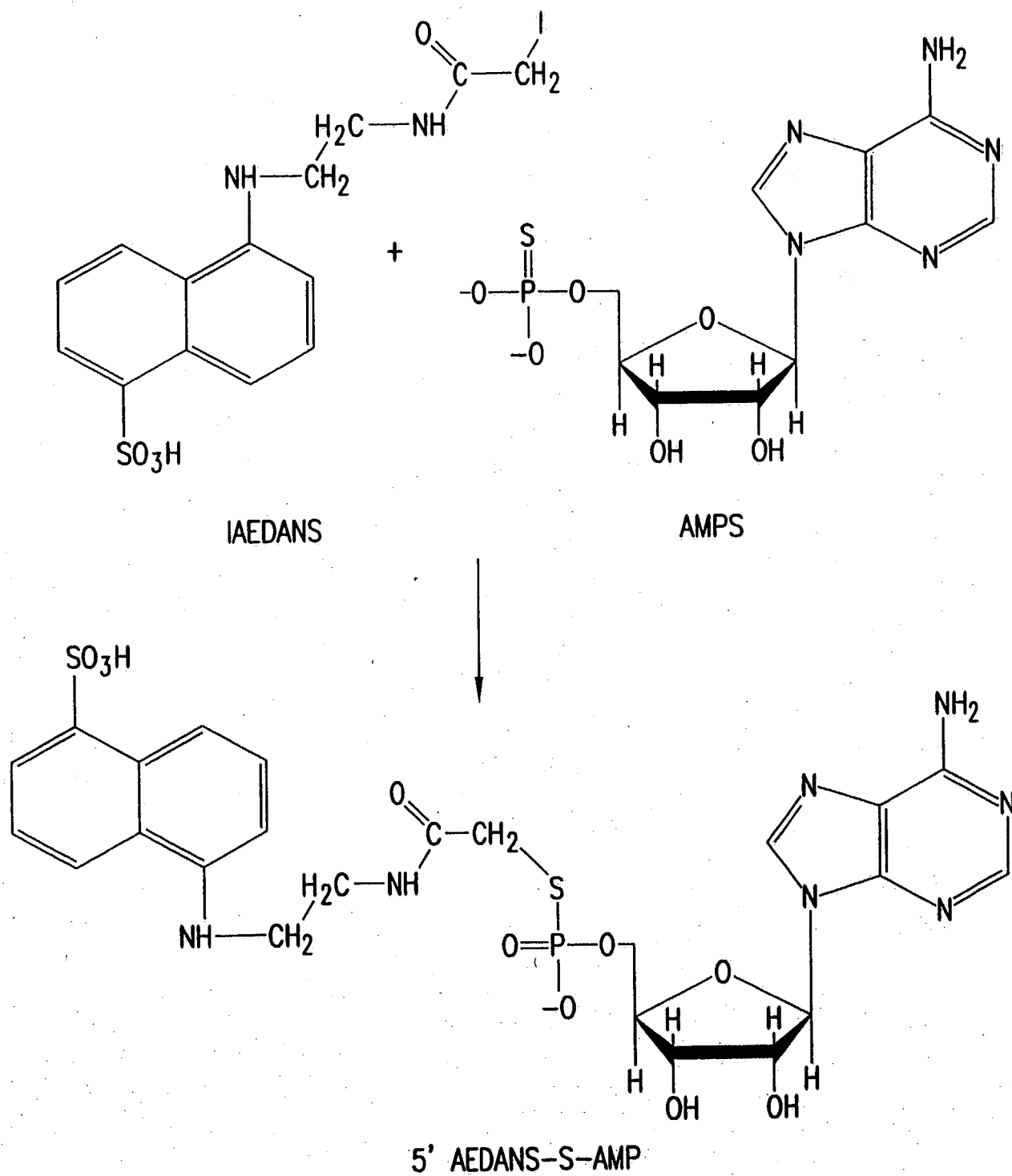


FIG.3

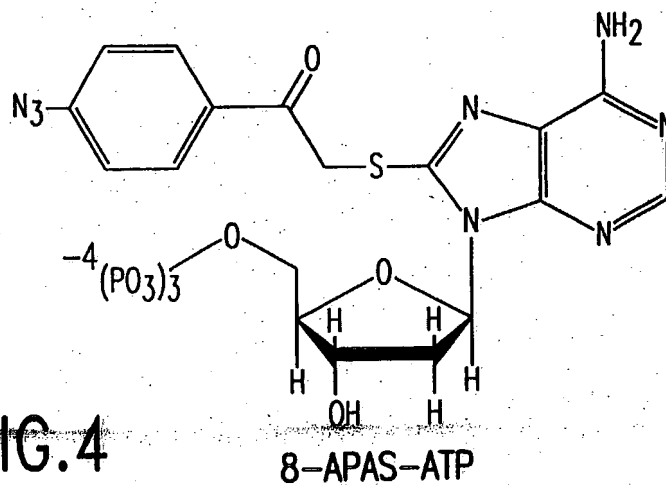
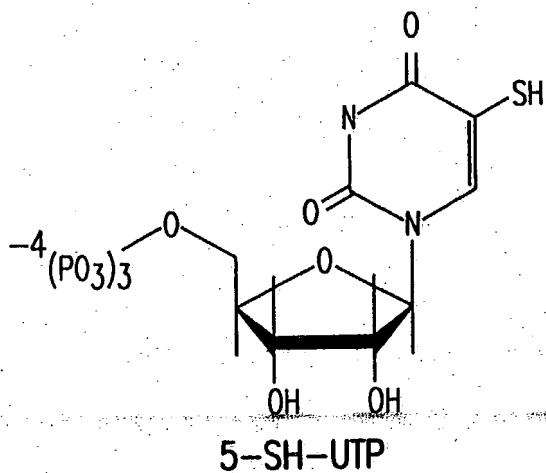
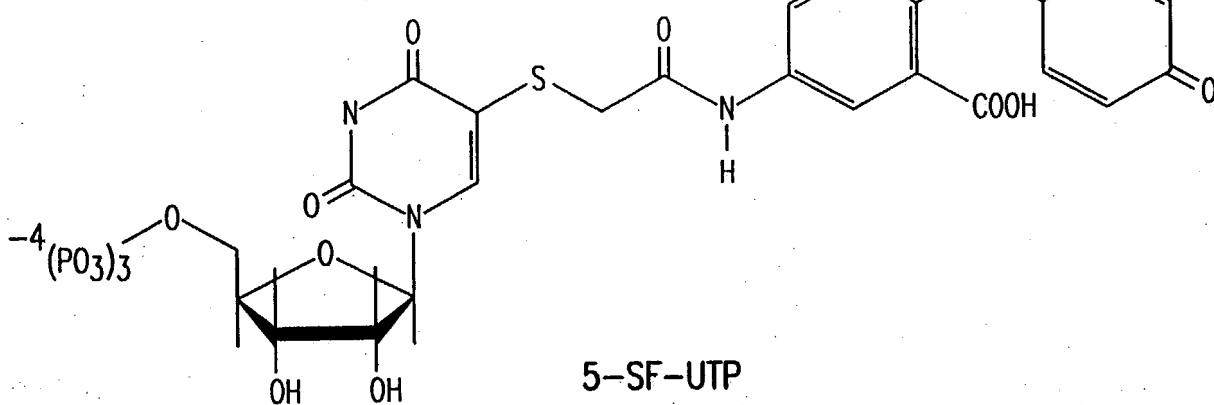
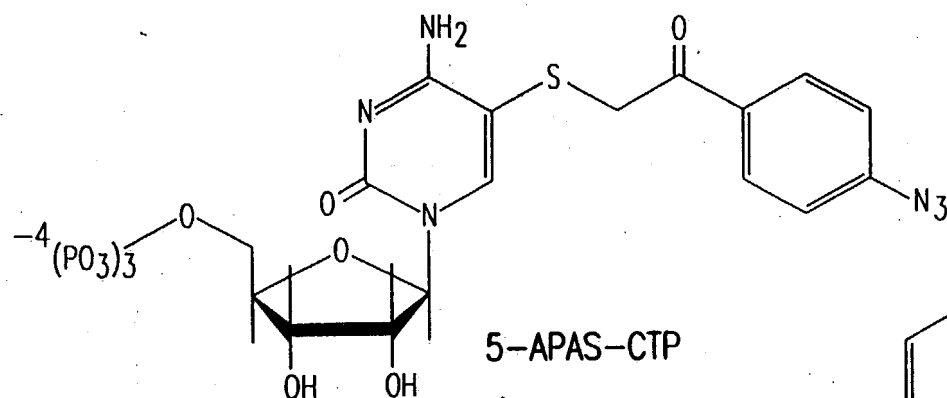
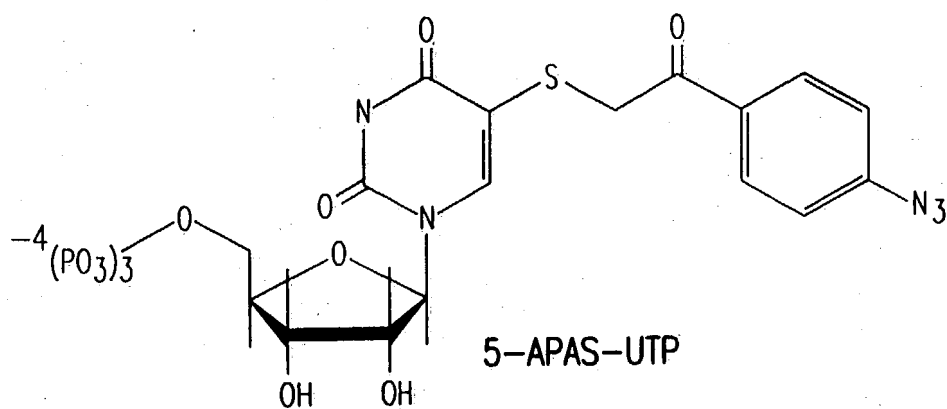


FIG. 4

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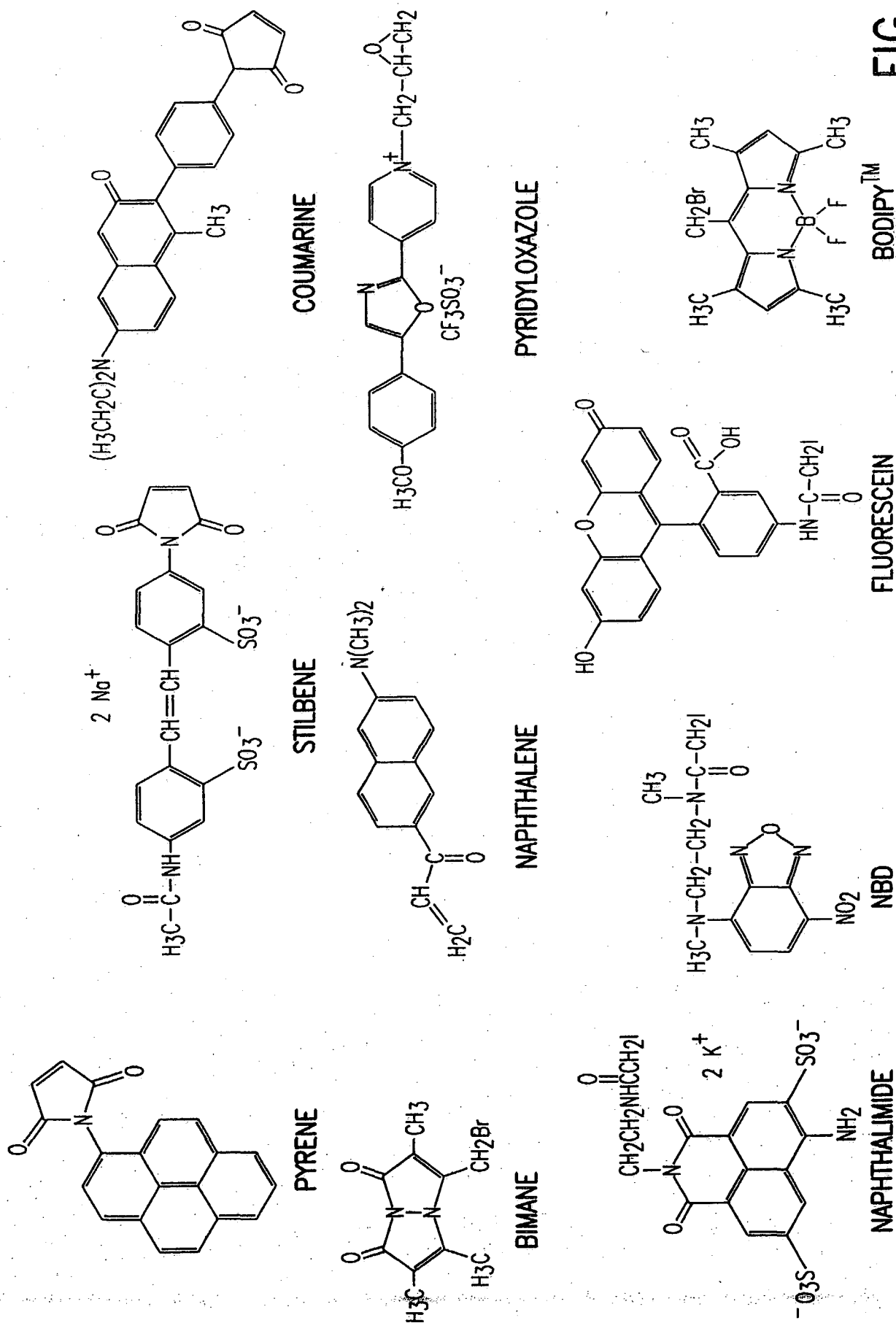


FIG.5

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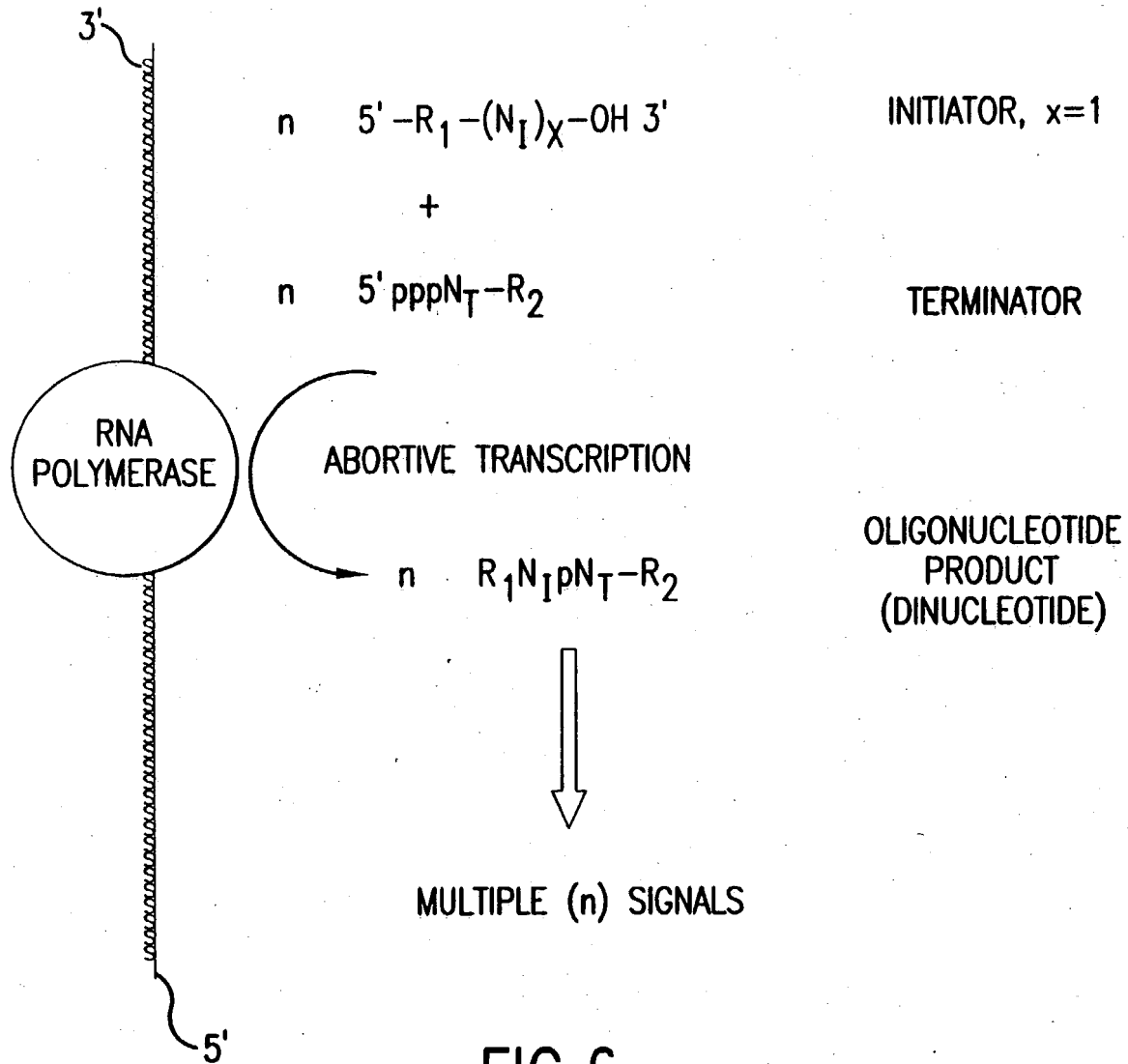


FIG.6

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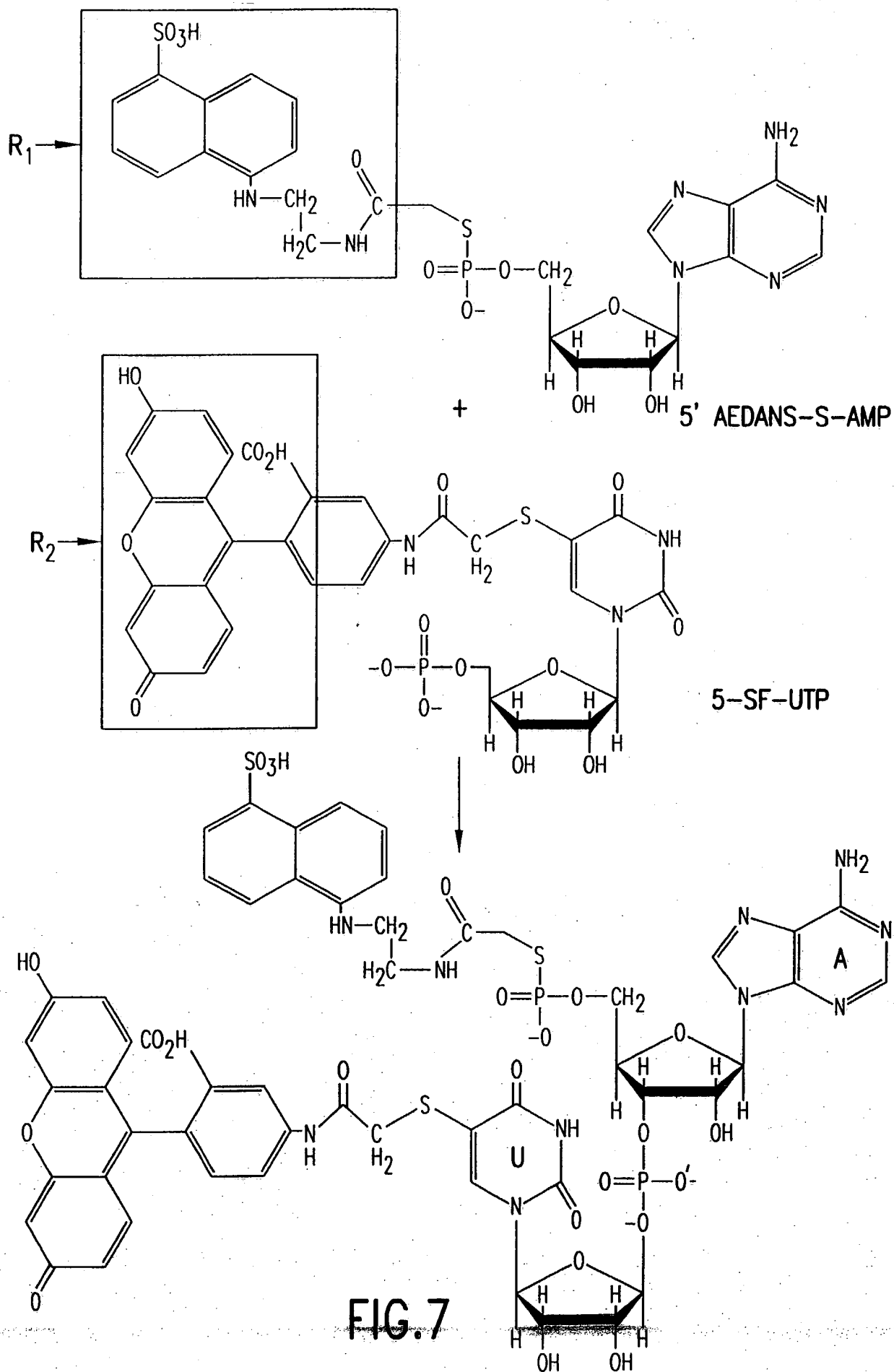


FIG. 7

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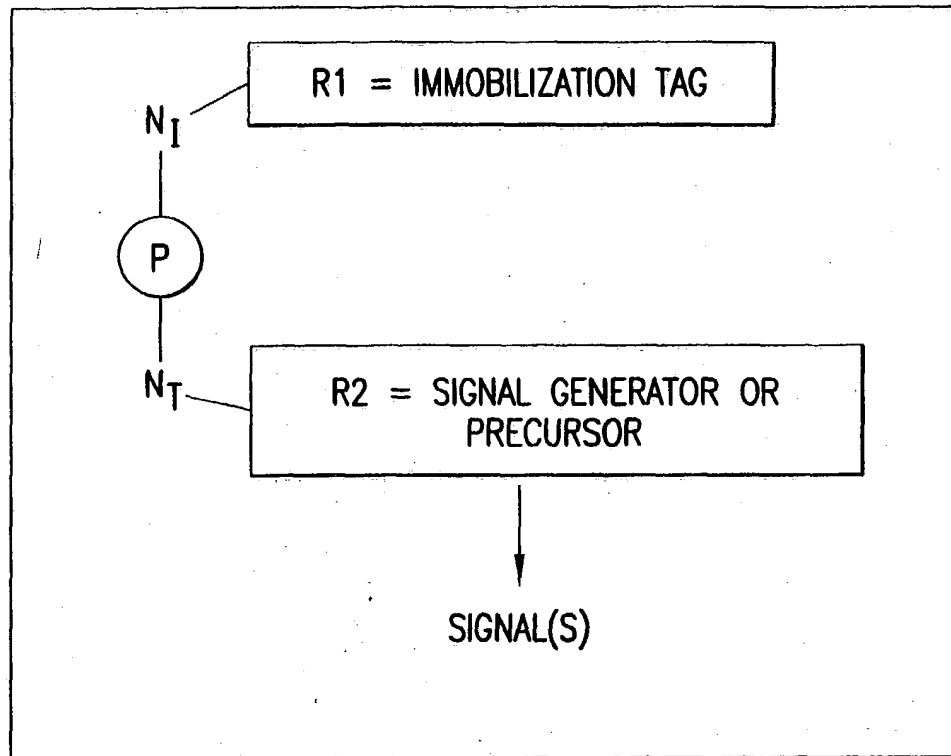


FIG.8

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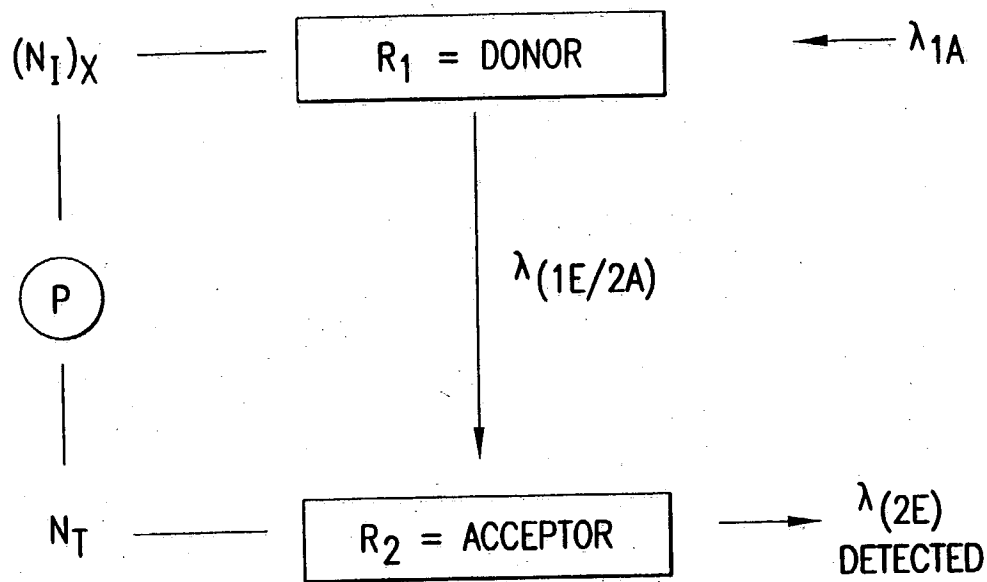
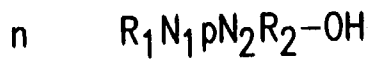
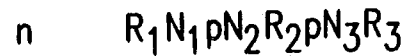
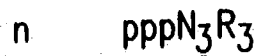


FIG.9



+



WHERE N_3 IS A TERMINATOR

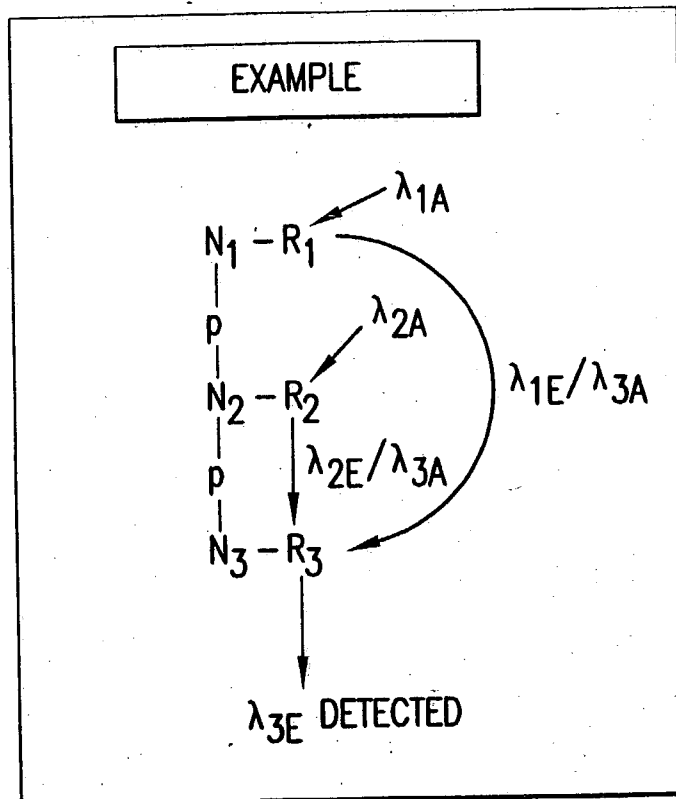


FIG.10

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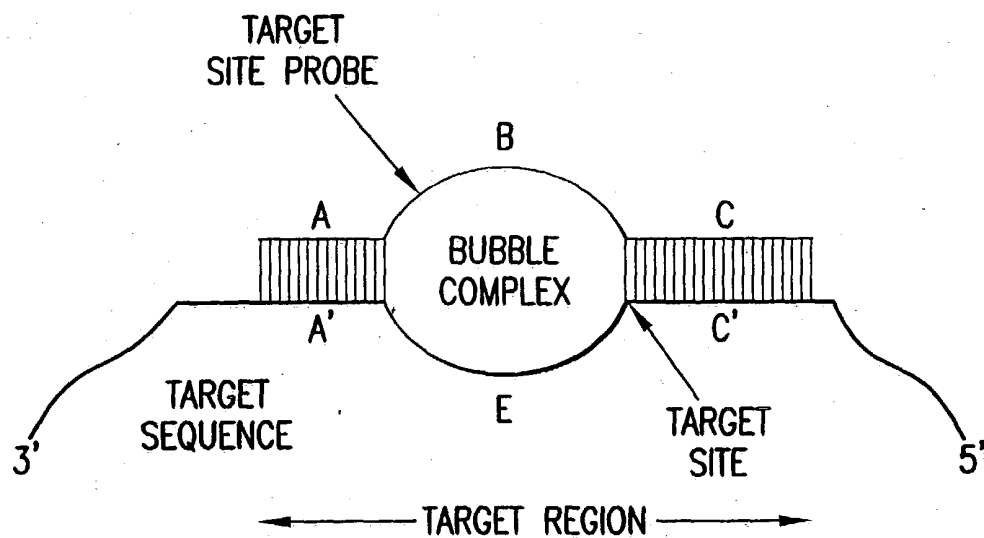


FIG.11

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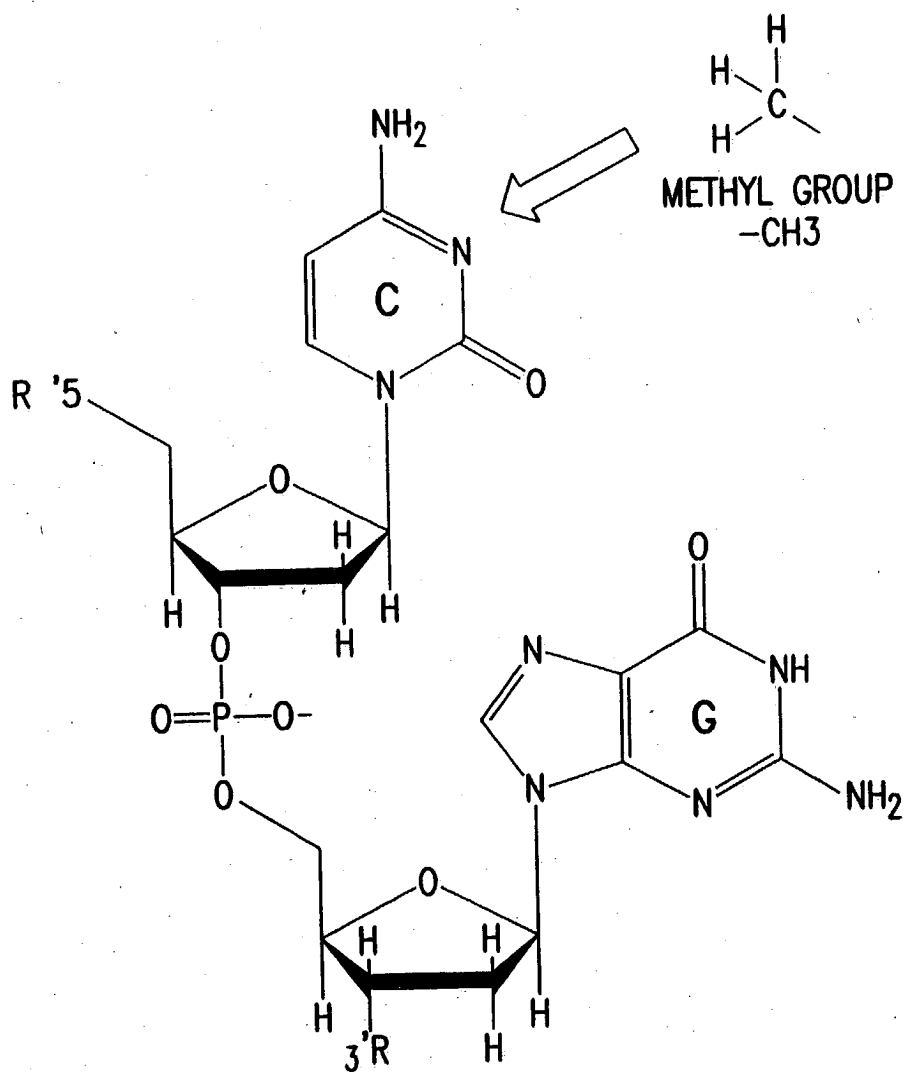


FIG.12

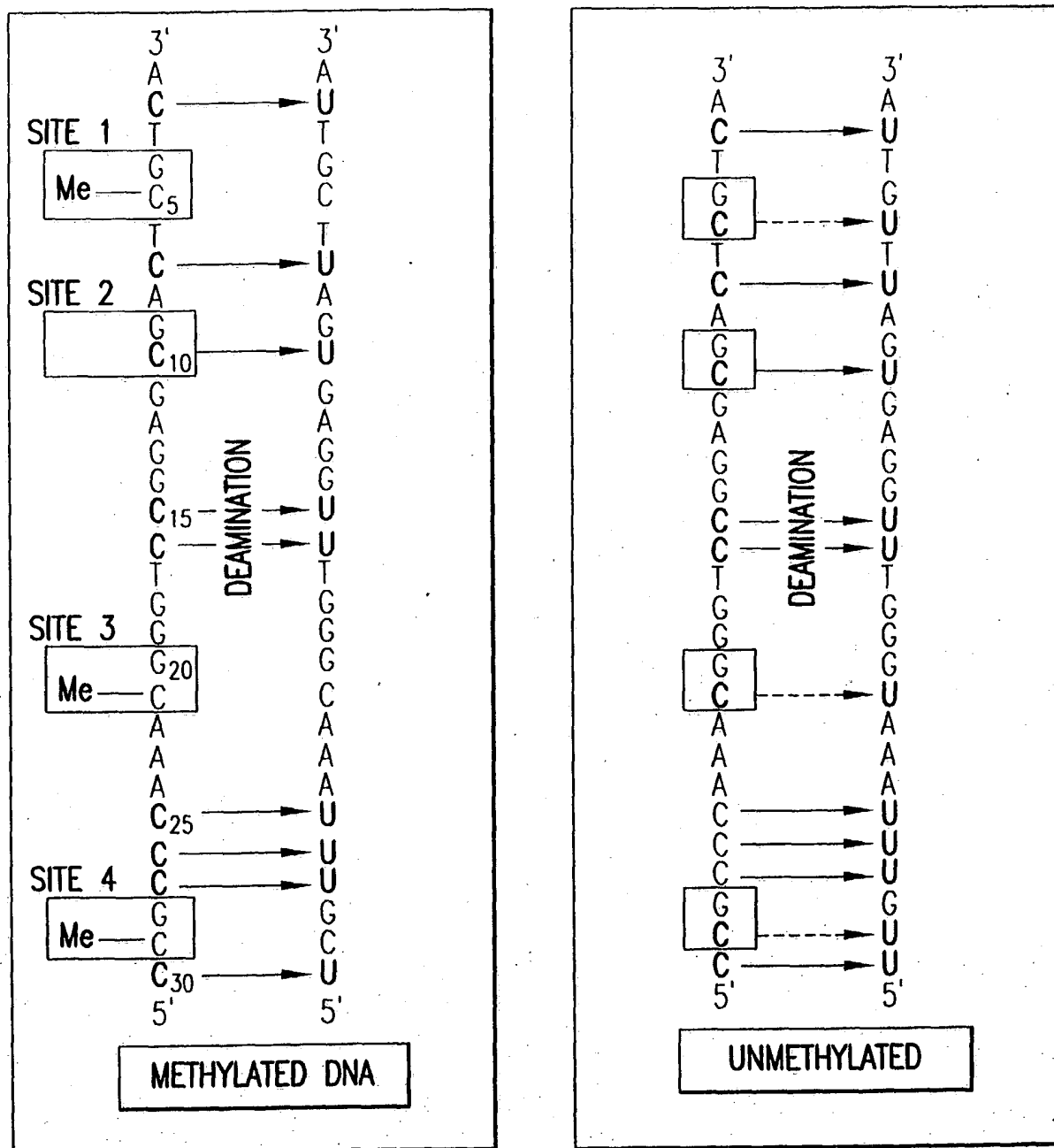


FIG.13

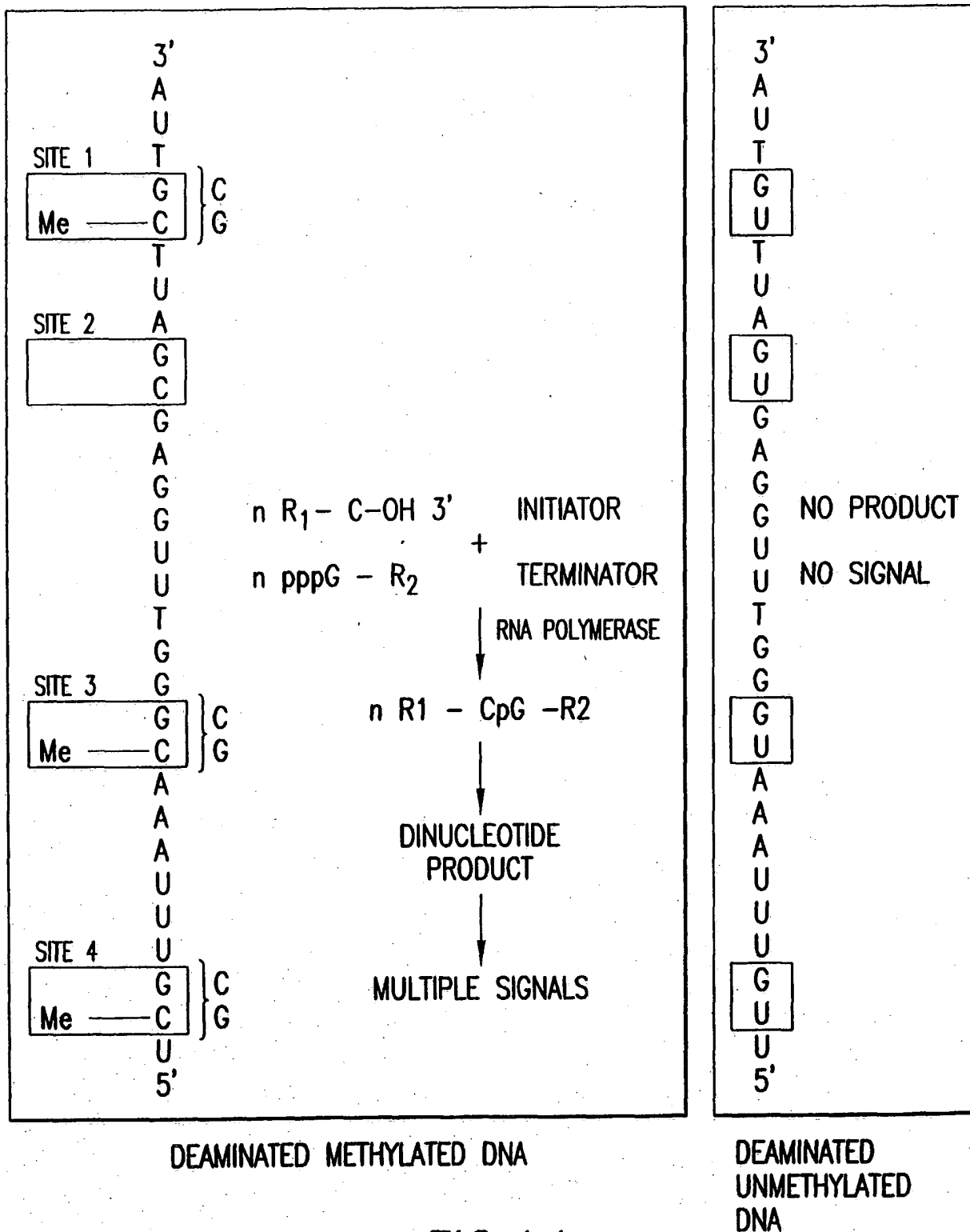


FIG.14

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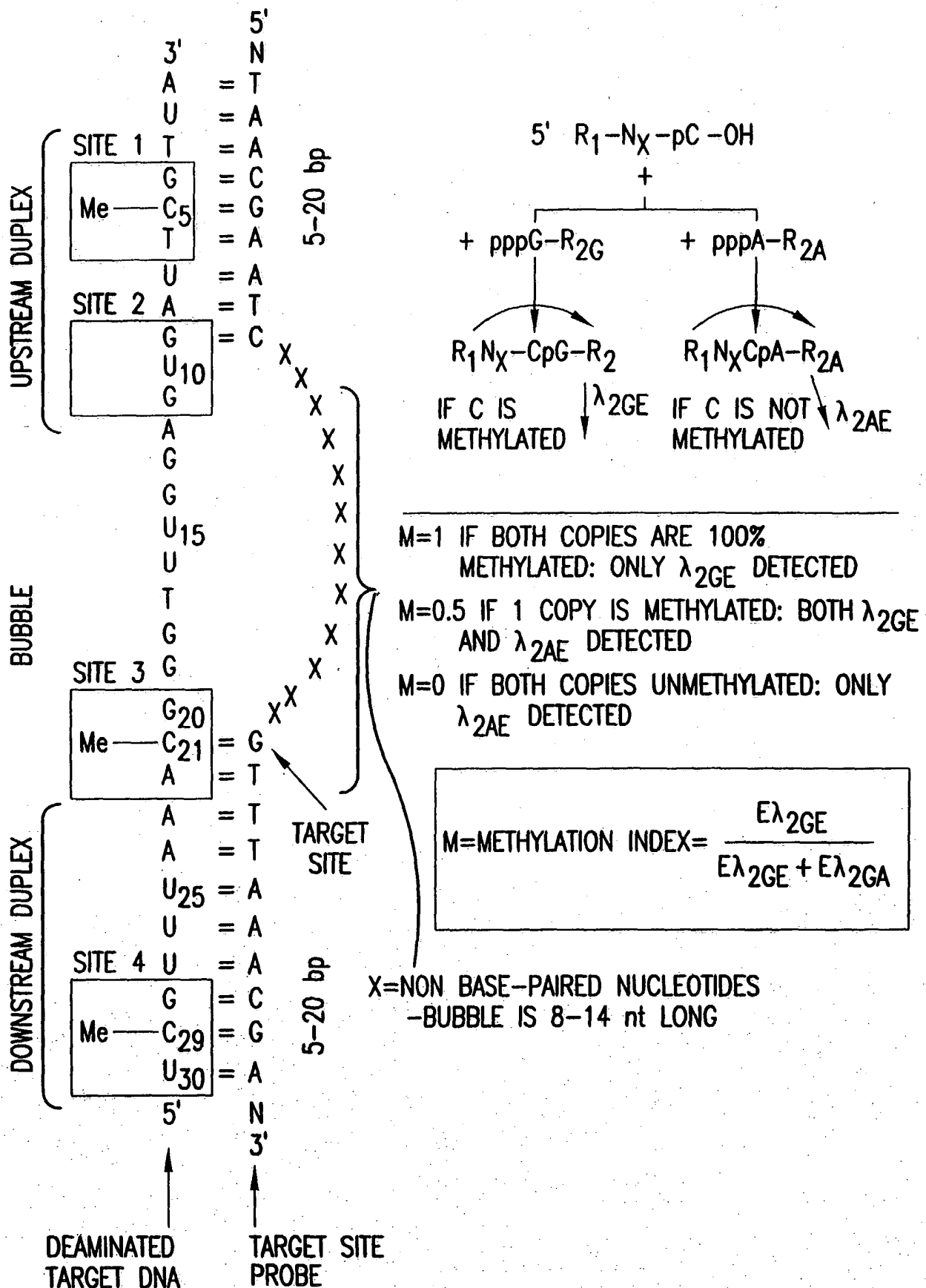


FIG.15

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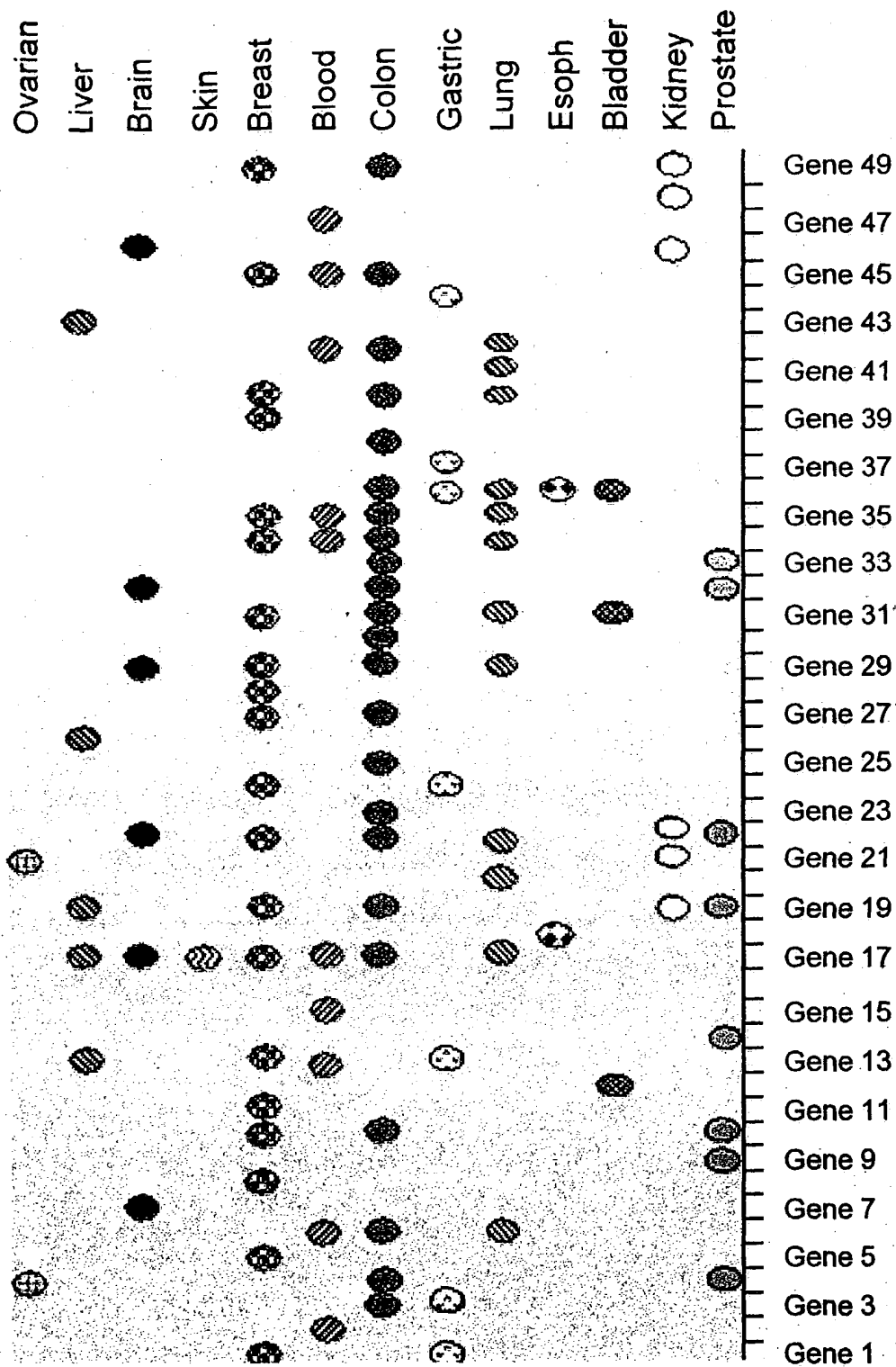


FIG. 16

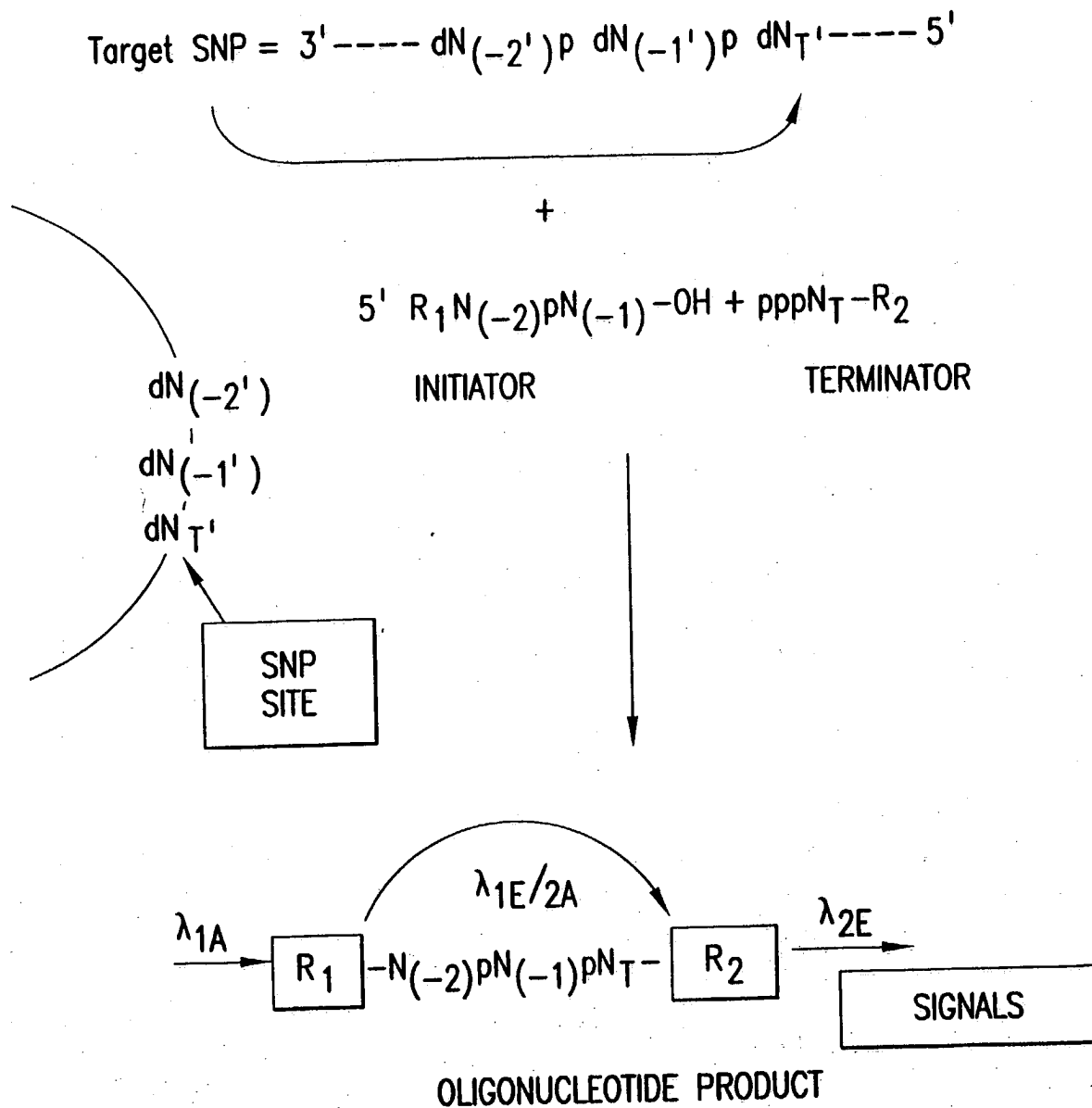


FIG.17

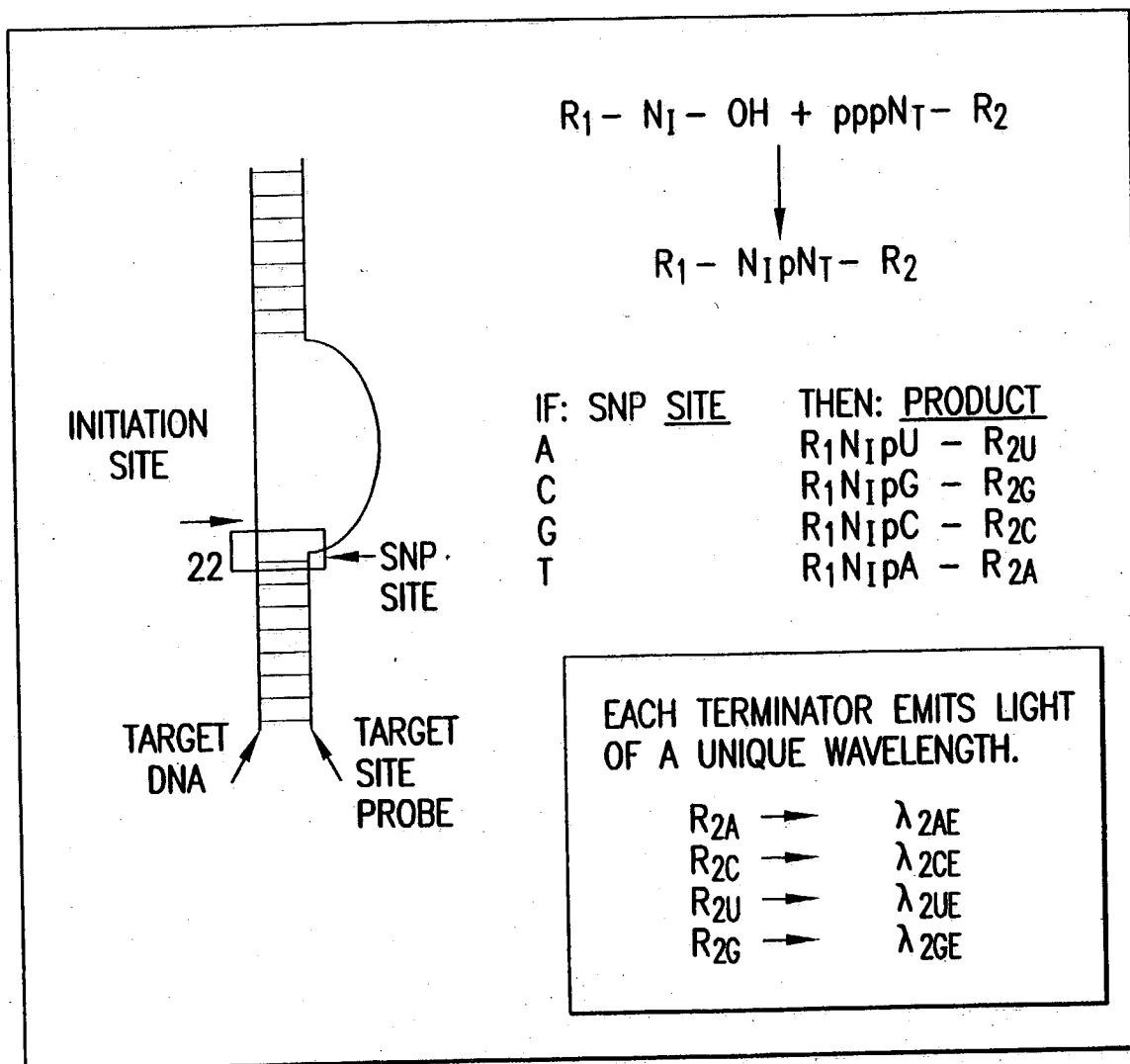


FIG.18

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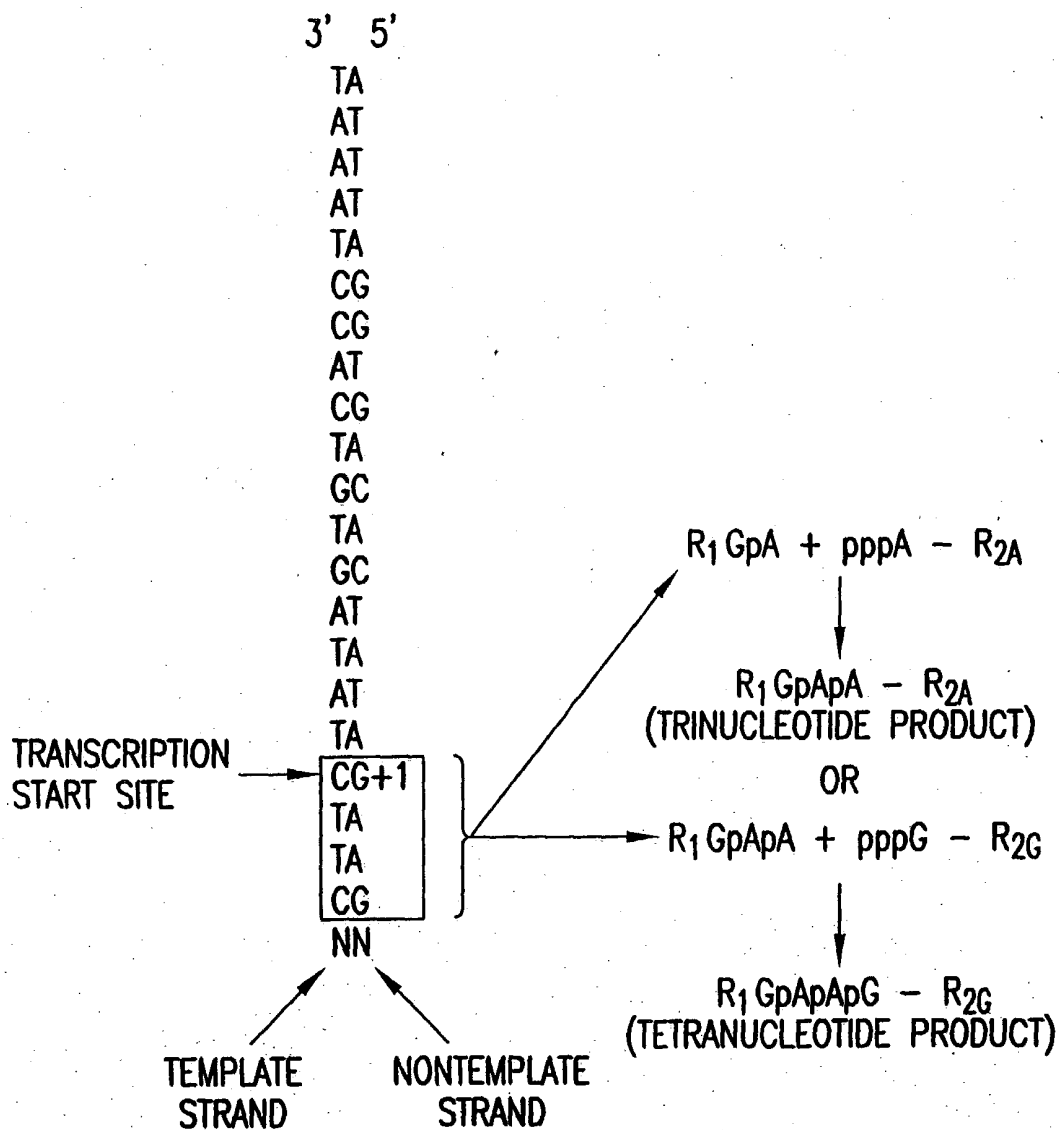
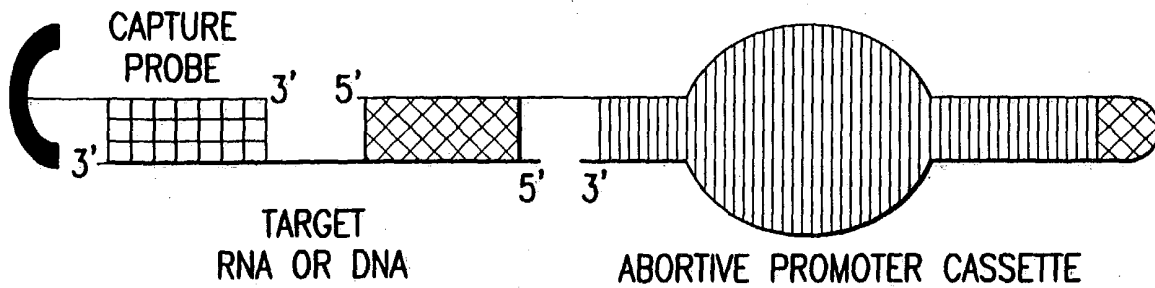


FIG.19

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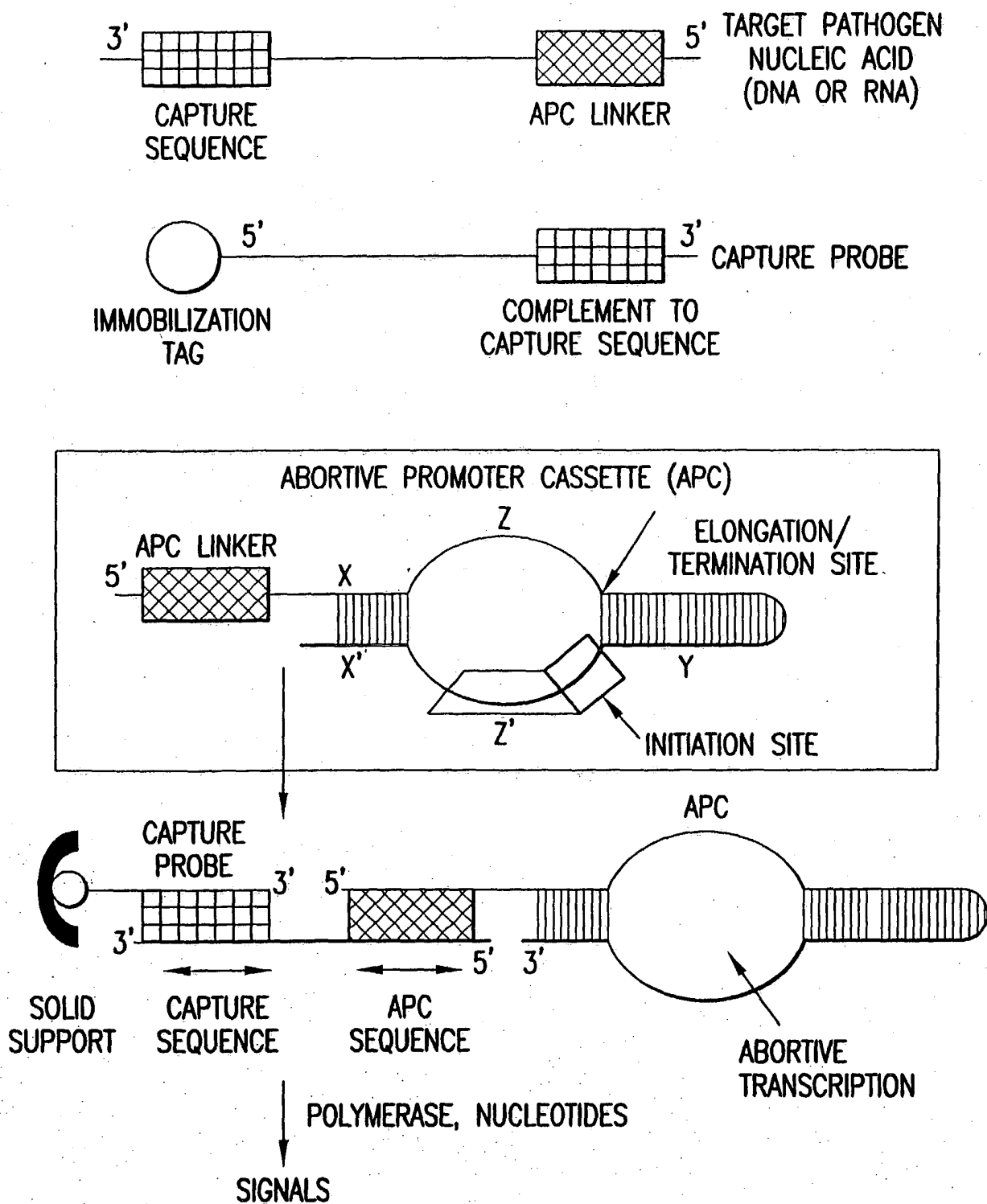


FIG.20

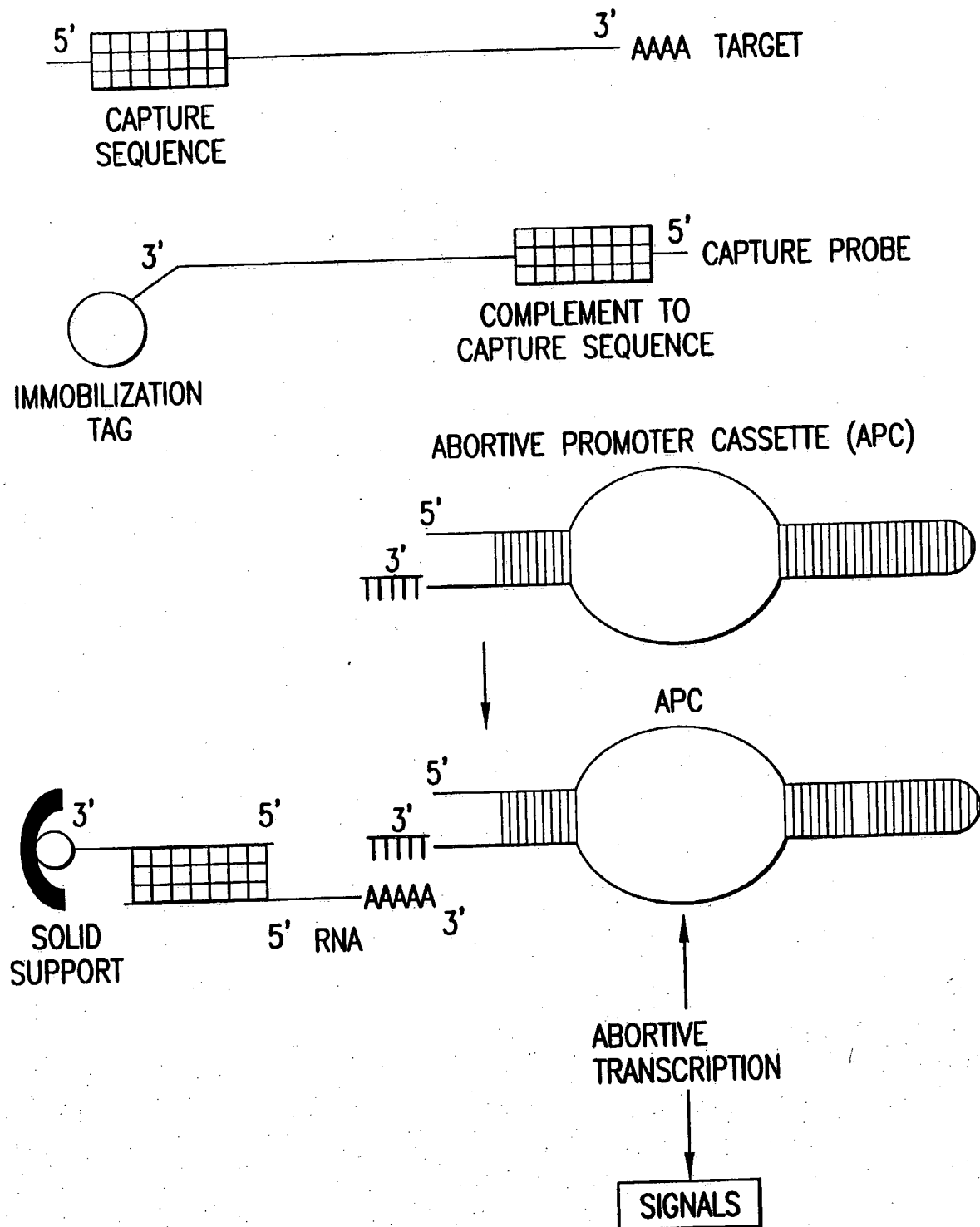


FIG.21

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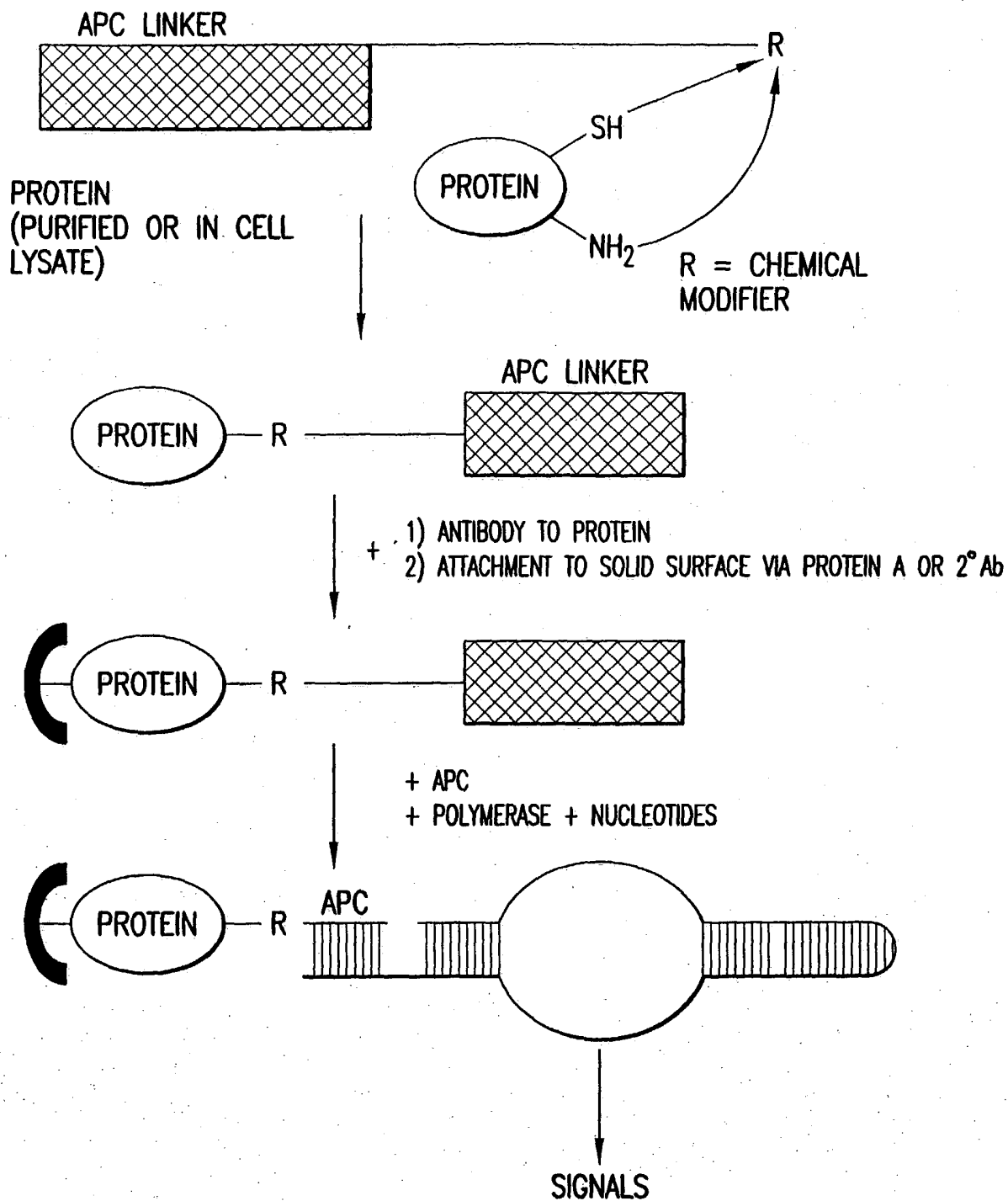


FIG.22

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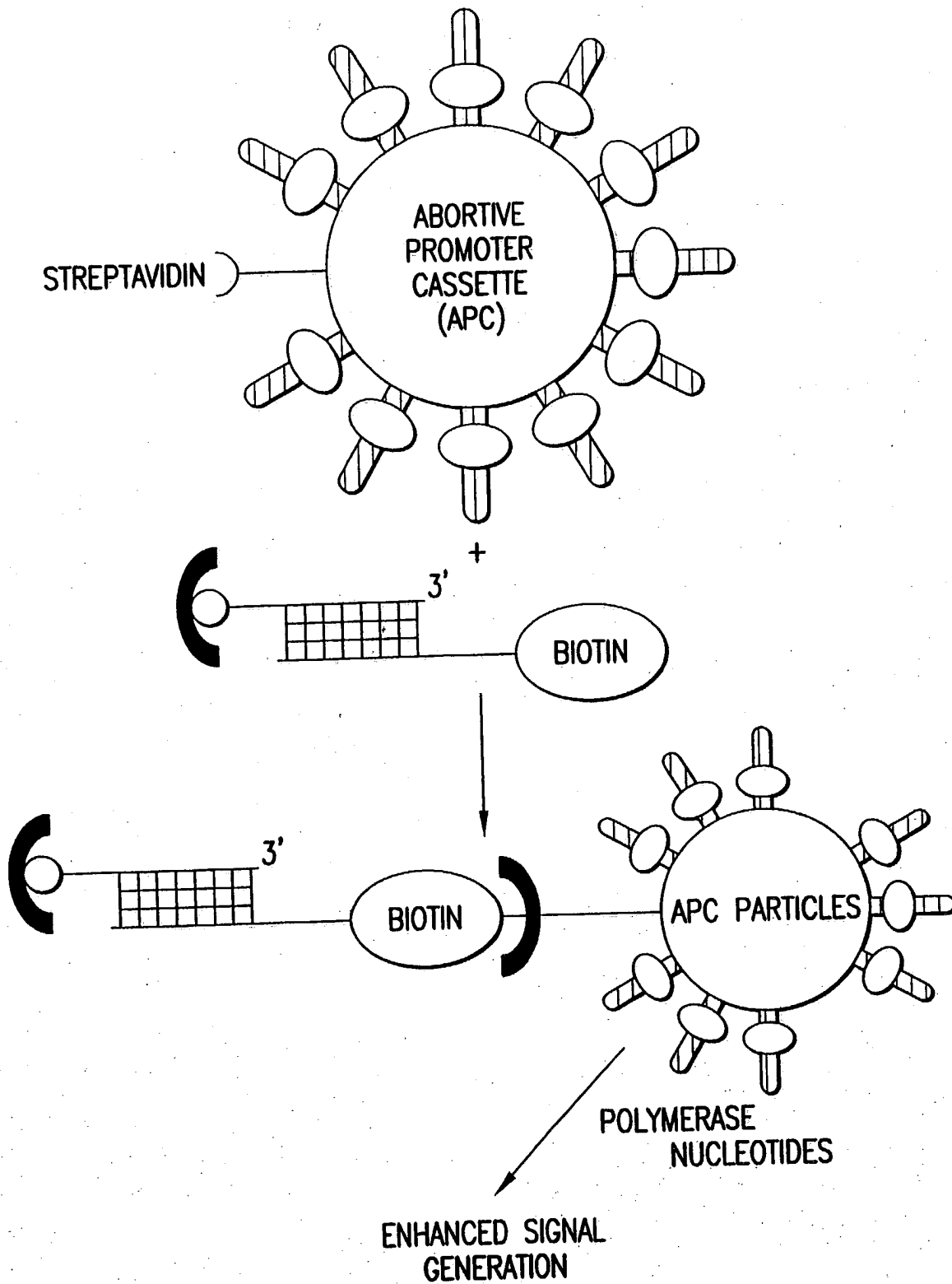
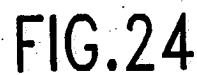


FIG.23



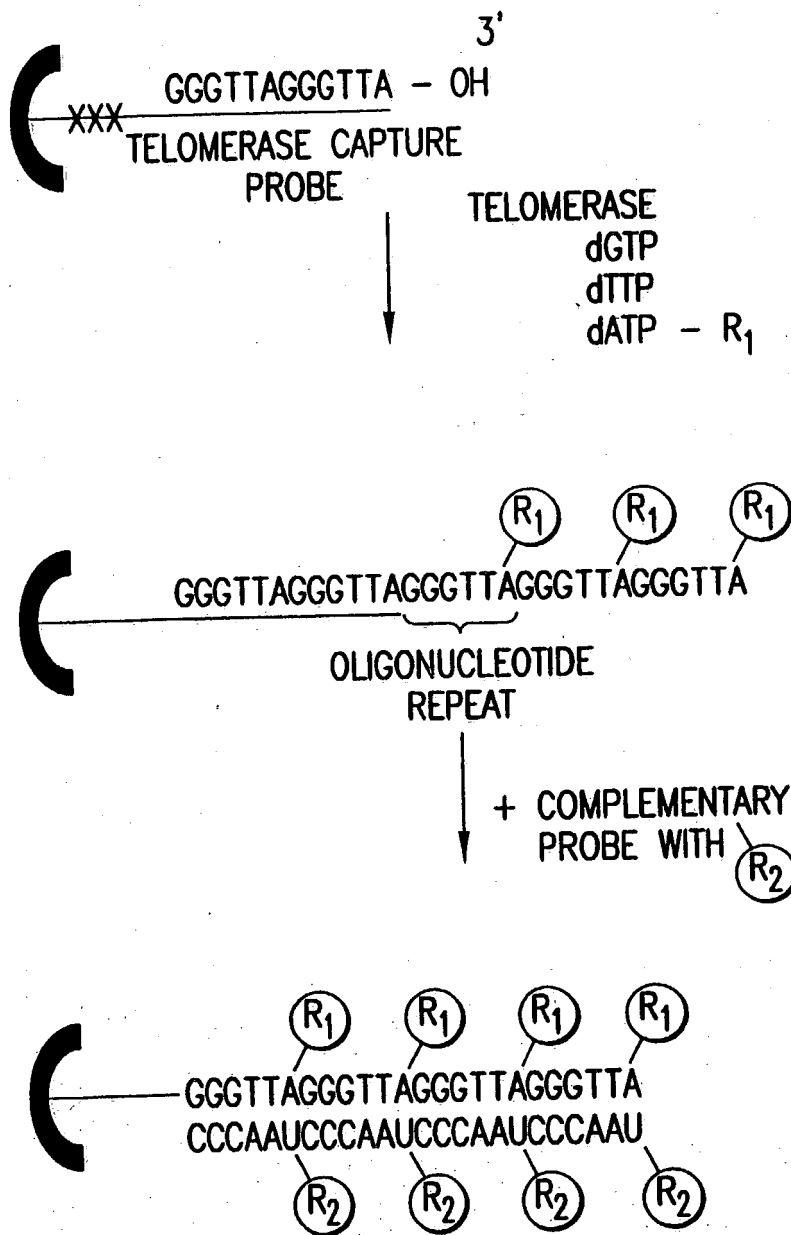
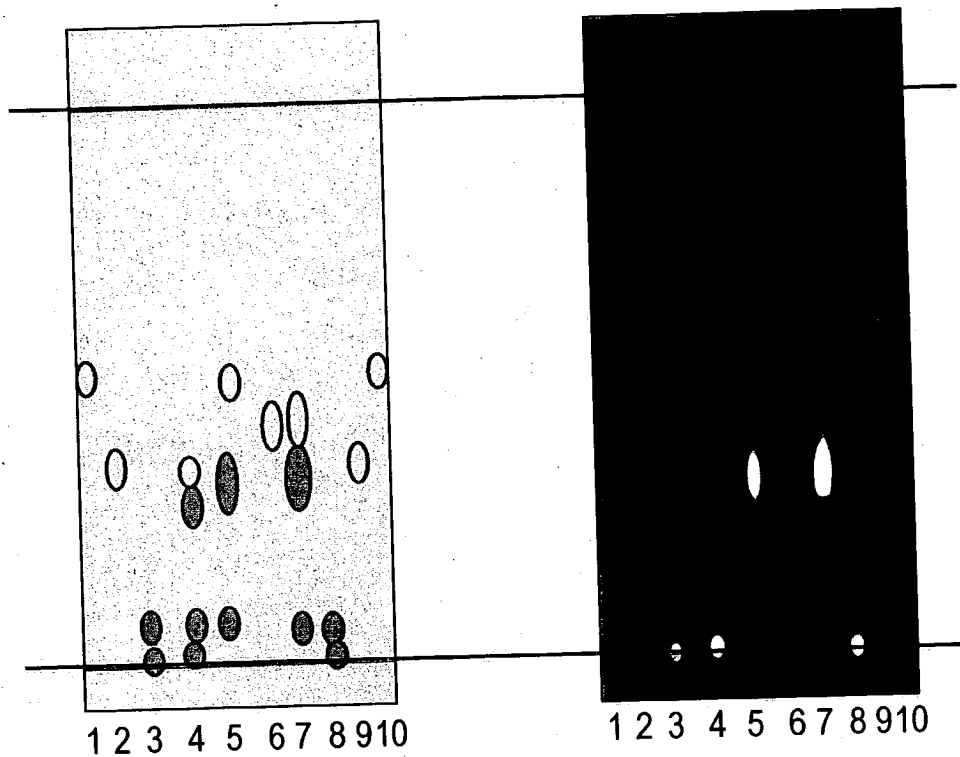


FIG.25

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Lane 1 CMPS
 Lane 2 CTPS
 Lane 3 IAEDANS
 Lane 4 AEDANS-SpppC
 Lane 5 AEDANS-S-pC
 Lane 6 AMPS
 Lane 7 AEDANS-SpA
 Lane 8 IAEDANS
 Lane 9 CTPS
 Lane 10 CMPS

FIG.26

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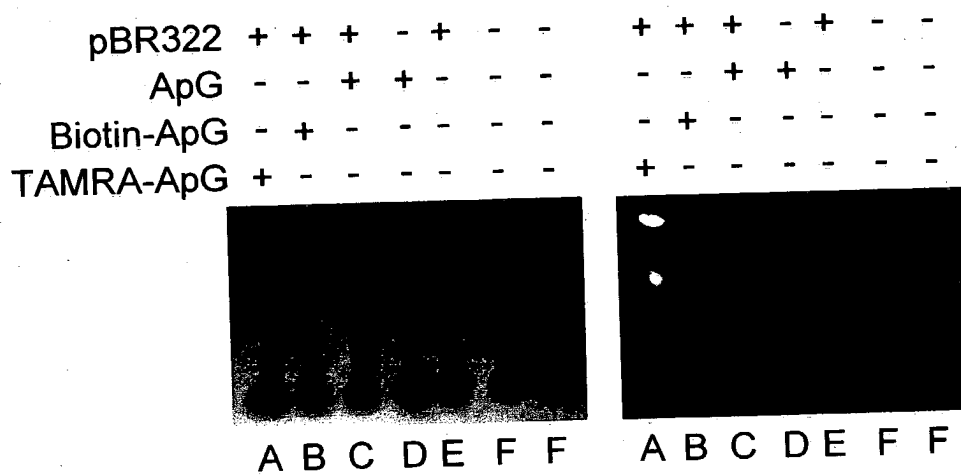


FIG.27

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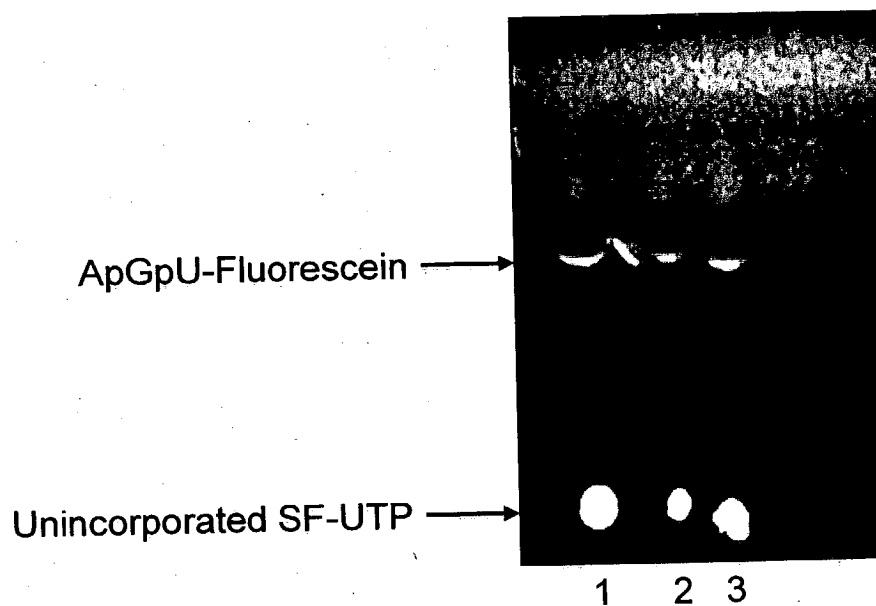


FIG.28

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ATATACTGGGCTACAAGGTTTAAGTCAACCAGGGATTGAAATATAACTTTTAAACAGAGCTGGATTATCCAGT
AGGCAGATTAAGCATGTGCTTAAGGCATCAGCAAAGTCTGAGCAATCCATTTTTTAAAACGTAGTACATGTTTT
TGATAAGCTTAAAAAGTAGTAGTCACAGGAAAAATTAGAACTTTTACCTCCTTGGCCTTGTTATACTCTTTAGT
GCTGTTTAACTTTTTCTTTGTAAGTGAGGGTGGTGGAGGGTGCCATAATCTTTTCAGGGAGTAAGTTCTTCTT
GGTCTTTCTTTCTTTCTTTCTTTCTTTTTCTTGAGACCAAGTTTCGCTCTTGCTCCCAGGCTGGAGTGCAA
TGGCGCGATCTCGGCTCACTGCAACCTCCGCCTTCTCCTGGGTTCAAGCGATTCTCCTACATCAGCCTCCGA
GTAGCTGGGATTACAGGCATGCGCCACCAAGCCCCGCTAATTTTGTATTTTTTAGTAGAGACAGGGTTTCGC
CATGTTGGTCAGGCTTGCTCGAACTCCTGGCCTCAGGTGATCCGCCTGTCTCGGCCTCCAGAATGCTGG
GATTATAGACGTGAGCCACCGCATCCGGACTTTCTTTTATGTAATAGTGATAATTCTATCCAAAGCATTTTTT
TTTTTTTTTGAGTCGGAGTCTCATTCTGTCAACCAGGCTGGAGGGTGGTGGCGCGATCTCGGCTTACTGCAA
CCTCTGCCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCTGAGTAGCTGGAATTACACACGTGCGCCA
CCATGGCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGTGTCAACATTTTGGCCAAGCTGGCCTCGAACTC
CTGACCTCAGGTGATCTGCCCCGCTCGGCTTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGCGTCT
GCTCCAAAGCATTTTCTTTCTATGCCTCAAACAAGATTGCAAGCCAGTCCTCAAAGCGGATAATTCAAGAGC
TAACAGGTATTAGCTTAGGATGTGTGGCACTGTTCTTAAGGCTTATATGTATTAATACATCATTTAAACTCACA
ACAACCCCTATAAAGCAGGGGGCACTCATATTCCTTCCCCCTTTATAATTACGAAAAATGCAAGGTATTTTC
AGTAGGAAAGAGAAATGTGAGAAGTGTGAAGGAGACAGGACAGTATTTGAAGCTGGTCTTTGGATCACTGTG
CAACTCTGCTTCTAGAACTGAGCACTTTTCTGGTCTAGGAATTATGACTTTGAGAATGGAGTCCGTCCTT
CCAATGACTCCCTCCCATTTTCTATCTGCCTACAGGCAGAATTCTCCCCGTCCTATTAAATAAACCTCA
TCTTTTCAGAGTCTGCTCTTATACCAGGCAATGTACAGTCTGAGAAACCCTTGCCCCAGACAGCGTTTTAC
ACGCAGGAGGGGAAGGGGAGGGGAAGGAGAGAGCAGTCCGACTCTCCAAAAGGAATCCTTTGAACTAGGG
TTTCTGACTTAGTGAACCCCGCTCCTGAAAATCAAGGGTTGAGGGGTAGGGGGACACTTTCTAGTCGTA
CAGGTGATTTGATTCTCGGTGGGGCTCTCACAAGTGGAAAGATAGTTTTGCTTTTTCTTATGATTAAGA
AGAAGCCATACTTTCCCTATGACACCAAACACCCCGATTCAATTTGGCAGTTAGGAAGGTTGTATCGCGGAG
GAAGGAAACGGGGCGGGGCGGATTTCTTTTTAACAGAGTGAACGCACTCAACACGCCTTTGCTGGCAGG
CGGGGGAGCGGGCTGGGAGCAGGGAGGCCGGAGGGCGGTGTGGGGGGCAGGTGGGGAGGAGCCAGT
CCTCCTTCTTGCCAACGCTGGCTCTGGCGAGGGCTGCTCCGGCTGGTGCCCCGGGGGAGACCCAACC
TGGGGCGACTTCAGGGGTGCCACATTCGCTAAGTGCTCGGAGTTAATAGCACCTCCTCCGAGCACTCGCTC
ACGGCGTCCCTTGCTGGAAAGATACCGCGGTCCCTCCAGAGGATTTGAGGGACAGGGTCCGAGGGGGC
TCTTCCGCCAGCACCGGAGGAAGAAAGAGGAGGGGCTGGCTGGTACCAGAGGGTGGGGCGGACCGCGT
GCGCTCGGGGCTGCGGAGAGGGGGAGAGCAGGCAGCGGGCGGGGAGCAGCATGGAGCCGGCGGC
GGGGAGCAGCATGGAGCCTTCGGCTGACTGGCTGGCCACGGCCGCGGGCCGGGTAGAGGAGGT
GCGGGCGCTGCTGGAGGCGGGGCGCTGCCAACGCACCGAATAGTTACGGTGGAGGCCGATCCAGGT
GGGTAGAGGGTCTGCAGCGGAGCAGGGGATGGCGGGCACTCTGGAGGACGAAGTTTGCAGGGGAATT
GGAATCAGGTAGCGCTTCGATTCTCCGAAAAAGGGAGGCTTCTGGGGAGTTTTAGAAGGGGTTGTAT
ATCACAGACCTCCTCCTGGCGACGCCCTGGGGGCTTGGGAAGCCAAGGAAGAGGAATGAGGAGCCACGCG
CGTACAGATCTCTGAATGCTGAGAAGATCTGAAGGGGGGAACATATTTGTATTAGATGGAAGTATGCTCTTT
ATCAGATACAAATTTACGAACGTTTGGGATAAAAAGGGAGTCTTAAAGAAATGTAAGATGTGCTGGGACTAC
TTAGCCTCCAATTCACAGATACCTGGATGGAGCTTATCTTTCTTACTAGGAGGGATTATCAGTGGAAATCTGT

FIG. 29A

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GGTGTATGTTGGAATAAATATCGAATATAAATTTTGATCGAAATTATTCAGAAGCGGCCGGGCGCGGTGCCTC
ACGCCTTGTAATCCCTTCACTTTGGGAGATCAAGGCGGGGGAATCACCTGAGGTCGGGAGTTCGAGACCA
GCCTGGCCAACAGGTGAAACCTCGCCTCTACTAAAAATACAAAAAGTAGCCGGGGGTGGTGGCAGGCGCCT
GTAATCCCAGCTACTCGGGAGGTTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCTGAGGTTGTAGTGAAC
AGCGAGATGGAGCCACTTCACTCCAGCCTGGGTGACAGAGTGAGACTTTGTCGAAAGAAAGAAAGAGAGAA
AGAGAGAGAGAAAAATTATTCAGAAGCAACTACATATTGTGTTTATTTTAACTGAGTAGGGCAAATAAATATA
TGTTTGCTGTAGGAACCTAGGAAATAATGAGCCACATTCATGTGATCATTCCAGAGGTAATATGTAGTTACCAT
TTTGGGAATATCTGCTAACATTTTTGCTCTTTTACTATCTTTAGCTTACTTGATATAGTTTATTTGTGATAAGAG
TTTTCAATTCCTCATTTTTGAACAGAGGTGTTTCTCCTCTCCCTACTCCTGTTTTGTGAGGGAGTTAGGGGAG
GATTTAAAAGTAATTAATACATGGGTAACCTAGCATCTCTAAAATTTTGCCAACAGCTTGAACCCGGGAGTTTG
GCTTTGTAGTCCTACAATATCTTAGAAGAGACCTTATTTGTTTAAAAACAAAAAGGAAAAAGAAAAGTGGATAG
TTTTGACAATTTTAAATGGAG

FIG. 29B

Appl. No. *To Be Assigned*; Group Art Unit: *To Be Assigned*; Inventors: Michelle M. Hanna.; Tel: 202.371-2600
Title: Molecular Detection Systems Utilizing Relative Oligonucleotide Synthesis

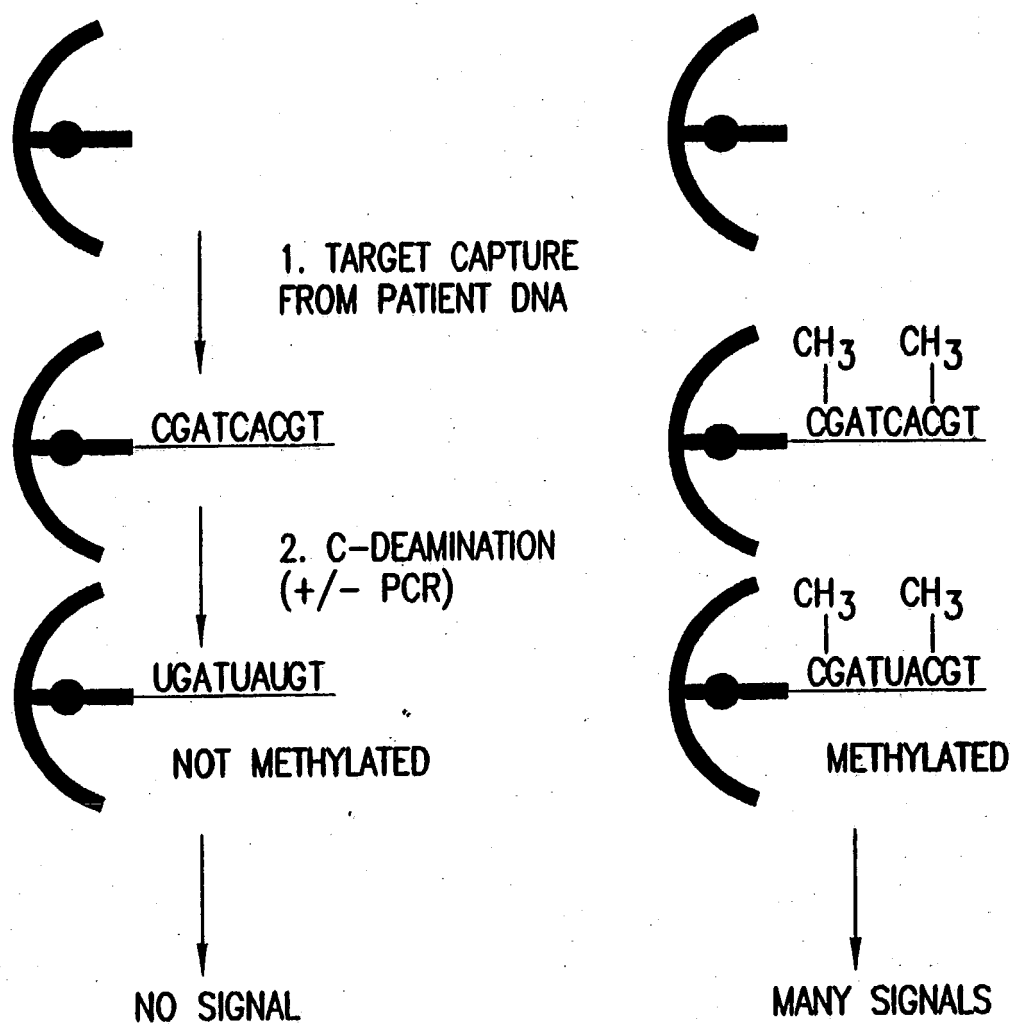


FIG. 30